IN THE CLAIMS

1. (Currently Amended) An organic-inorganic hybrid composite which comprises:

an inorganic component; and

an organic conducting component; the inorganic component inhibiting deprotonation of the organic conducting component when the composite is exposed to a medium having a pH which would deprotonate the organic conducting component but for the presence of the inorganic component, wherein the medium is an aqueous medium having a pH greater than 6 and further wherein the organic conducting polymer is a water-dispersible inherently conductive polymer which comprises:

a first strand comprised of a π-conjugated polymer; and

a second strand comprised of a polymer selected from the group consisting of poly(styrene sulfonic acid), poly(acrylic acid), poly(vinylmethylether-co-maleic acid) and poly(vinylphosphonic acid).

2. (Cancelled)

3. (Currently Amended) The composite of claim [2] 1 wherein the organic conducting component is an inherently conductive polymer.

4. (Previously Presented) The composite of claim 3 wherein the inherently conductive polymer is selected from the group consisting of polyaniline, polyacetylene, polypyrrole, polythiophene and poly (phenylene vinylene).

5. (Cancelled)

6. (Previously Presented) The composite of claim 5 wherein the first strand is selected from the group consisting of polyaniline, polyacetylene, polypyrrole, polythiophene and poly (phenylene vinylene).

7. (Currently Amended) The composite of claim 2 wherein the inorganic component is selected from the group consisting of metal oxides, metal sulfides, solid acids, acidic salts, inorganic phosphates, zeolites, and carbon[~~, such as graphite, fullerenes and nano-tubes, metals and combinations thereof~~].

8. (Previously Presented) The composite of claim 7 wherein the inorganic component comprises a core, the organic conducting component is adsorbed thereto to form a coating on the core.

9. (Previously Presented) The composite of claim 7 wherein the organic conducting component is a double stranded complex comprised of polyaniline and poly(acrylic acid), the complex having a 1:2 molar ratio of polyaniline to poly(acrylic acid).

10. (Previously Presented) The composite of claim 9 wherein the inorganic component is selected from the group consisting of Zn, C, Al, MoO_3, $Zr(HPO_4)_2$, V_2O_5 and WO_3.

11. (Previously Presented) The composite of claim 7 wherein the organic conducting component is a double stranded complex comprised of polyaniline and poly(methylacrylate-co-acrylic acid).

12. (Previously Presented) The composite of claim 11 wherein the inorganic component is selected from the group consisting of MoO_3 and $Zr(HPO_4)_2$.

13. (Previously Presented) The composite of claim 8 wherein the organic conducting component is an inherently conducting polymer and the core has a diameter within the range of between about 0.1 micron to 5 millimeter.

14. (Previously Presented) The composite of claim 13 wherein the composite has a diameter within the range of between about 0.2 to 125 microns.

15. (Previously Presented) The composite of claim 13 wherein the coating has a thickness within the range of between about 0.01 to 2 microns.

16. (Previously Presented) The composite of claim 15 wherein the coating has a thickness of 1 micron and the diameter of the composite is greater than 9.7 microns.

17. (Previously Presented) The composite of claim 15 wherein the coating has a thickness of 2 microns and the diameter of the composite is greater than 19.4 microns.

18. (Previously Presented) The composite of claim 3 wherein wherein the inorganic component is selected from the group consisting of metal oxides, metal sulfides, solid acids, acidic salts, inorganic phosphates, zeolites, carbon, such as graphite, fullerenes and nano-tubes, metals and combinations thereof and the composite is dispersed in a non-conductive host.

19. (Previously Presented) The composite of claim 18 wherein the host is a polymer matrix, a paint system or an organic coating.

20. (Currently Amended) [~~The composite of claim 1~~] An organic-inorganic hybrid composite which comprises:

an inorganic component; and

an organic conducting component; the inorganic component inhibiting deprotonation of the organic conducting component when the composite is exposed to a medium having a pH which would deprotonate the organic conducting component but for the presence of the inorganic component, wherein the medium is an aqueous medium having a pH greater than 6 and further wherein the organic conducting polymer is a water-dispersible inherently conductive polymer which comprises:

a first strand comprised of a π-conjugated polymer; and

a second strand comprised of a polymer selected from the group consisting of poly(styrene sulfonic acid), poly(acrylic acid), poly(vinylmethylether-co-maleic acid) and poly(vinylphosphonic acid) wherein the inorganic component comprises a matrix, the organic component being intercalated in the matrix.

21. (Currently Amended) A method for inhibiting the deprotonation of an inherently conductive organic polymer which comprises:

adding an inorganic solid to a solution comprised of the inherently conductive organic polymer to form a mixture;

stirring the mixture to facilitate the spontaneous adsorption of the inherently conductive organic polymer to the inorganic solid to [~~from~~] form an inorganic-hybrid composite;

separating the composite from the mixture, the composite having a core comprised of the inorganic solid enveloped by the adsorbed inherently conductive organic polymer, the inorganic-hybrid composite inhibiting the deprotonation of the inherently conducive organic polymer when the inherently conductive organic polymer is subjected to a medium having a pH which would deprotonate the organic polymer but for the presence of the inorganic solid.

22. (Previously Presented) The method of claim 21 wherein the inherently conductive organic polymer is water-dispersible and which comprises a first strand comprised of a π-conjugated polymer and a second strand comprised of a polymer selected from the group consisting of poly(styrene sulfonic acid), poly(acrylic acid), poly(vinylmethylether-co-maleic acid) and poly(vinylphosphonic acid) and wherein stirring comprises uninterrupted stirring for three days at 25°C.

23. (Currently Amended) The method of claim 22 wherein the inorganic solid is selected from the group consisting of metal oxides, metal sulfides, solid acids, acidic salts, inorganic phosphates, zeolites, and carbon[~~, such as graphite, fullerenes and nano-tubes, metals and combinations thereof~~].

24. (Currently Amended) A method of synthesizing [~~the~~] a composite [~~of claim 21~~] which can inhibit the deprotonation of an inherently conductive organic polymer which comprises:

adding the inorganic component to the organic conducting component to form a mixture;

stirring the mixture to facilitate the spontaneous adsorption of the organic conducting component to the inorganic component;

separating the mixture to yield the composite.

25. (Currently Amended) The method of claim 24 wherein the organic conducting component is a inherently conductive organic polymer and the inorganic component is a finely divided solid selected from the group consisting of metal oxides, metal sulfides, solid acids, acidic salts, inorganic phosphates, zeolites, and carbon[~~, such as graphite, fullerenes and nano-tubes, metals and combinations thereof~~].

26. (Previously Presented) The method of claim 25 wherein stirring comprises uninterrupted stirring for three days at 25°C.

27. (Previously Presented) A method for inhibiting the deprotonation of an inherently conductive organic polymer which comprises:

adding an inorganic solid to a solution comprised of the inherently conductive organic polymer to form a mixture;

stirring the mixture to from an inorganic-hybrid composite;

separating the composite from the mixture, the composite inhibiting the deprotonation of the inherently conducive organic polymer when the inherently conductive organic polymer is subjected to a medium having a pH which would deprotonate the organic polymer but for the presence of the inorganic solid.

28. (Previously Presented) The method of claim 27 wherein the inherently conductive organic polymer is water-dispersible and which comprises a first strand comprised of a π-conjugated polymer and a second strand comprised of a polymer selected from the group consisting of poly(styrene sulfonic acid), poly(acrylic acid), poly(vinylmethylether-co-maleic acid) and poly(vinylphosphonic acid). and wherein stirring comprises uninterrupted stirring for three days at 25°C.

29. (Currently Amended) The method of claim 28 wherein the inorganic solid is selected from the group consisting of metal oxides, metal sulfides, solid acids, acidic salts, inorganic phosphates, zeolites, and carbon[~~, such as graphite, fullerenes and nano-tubes, metals and combinations thereof~~].

30. (Previously Presented) The method of claim 29 wherein stirring comprises uninterrupted stirring for three days at 25°C.

31. (New) The composite of claim 7 wherein said carbon is graphite, fullerenes and nano-tubes, metals or combinations thereof.

32. (New) The composite of claim 23 wherein said carbon is graphite, fullernes and nano-tubes, metals or combinations thereof.

33. (New) The composite of claim 25 wherein said carbon is graphite, fullernes and nano-tubes, metals or combinations thereof.

34. (New) The composite of claim 29 wherein said carbon is graphite, fullernes and nano-tubes, metals or combinations thereof.